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FEDERAL COMMUNICATIONS COMMISSION
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FEDERAL COMMUNICATIONS COMMISSION
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In the Matter of)

Deployment of Wireline Services Offering)

Advanced Telecommunications Capability)

CC Docket No. 98-147

COMMENTS OF AMERITECH

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Within this narrow subset, the NPRM proposes two “pathways” to encourage deployment of advanced telecommunications capability by wireline carriers: one for ILECs and one for competitive local exchange carriers (“CLECs”).

As to deployment by CLECs, the Commission proposes solutions to perceived technical and administrative shortcomings in two current ILEC offerings: (1) CLEC access to the ILECs’ copper loop plant that supports XDSL services, and (2) collocation arrangements permitting CLECs to physically place equipment in ILEC central office space. Ameritech’s unbundled loops and collocation offerings are not a barrier to CLEC deployment of advanced telecommunications capability. As these comments demonstrate, Ameritech currently offers virtually all of the arrangements discussed in the NPRM. Accordingly, no CLEC CAN credibly demonstrate that Ameritech’s loops and collocation offerings are barriers to deployment or do not otherwise comply with the Act and the Commission’s rules.

To be sure, some CLECs complain that prices for loops and collocation are too high, and others seek arrangements that exceed or are contrary to the requirements of the Act. The Commission must reject each of those complaints. Ameritech’s prices for loops and collocation were established in state commission proceedings. As the Eighth Circuit has held, such pricing is within the sole jurisdiction of the states. Even if the Commission had the authority to set those prices, there would be no reason to do so: Ameritech’s prices for loops and collocation are among the lowest—if not the lowest—in the country. In addition, the Commission should not impose additional regulation in a proceeding under section 706, which by its terms is expressly deregulatory in nature. The Commission can neither impose additional regulation that is inconsistent with the Act,

nor impose additional regulation that is unrelated to the deployment of advanced telecommunications services.

The Commission also proposes two incentives for deployment of advanced telecommunications capability by ILECs. First, the Commission tentatively concludes that if ILECs offer advanced telecommunications capability by means of separate subsidiaries, such data affiliates would not be ILECs and, therefore would not be subject to the duties of an ILEC under section 251(c). Second, with respect to BOC data affiliates, the NPRM seeks comment on relatively minor forms of interLATA relief, and on the criteria to be used in evaluating requests for such relief.⁴

Although Ameritech questions whether, as a matter of law, an ILEC affiliate could be deemed an incumbent under section 251(h) simply because it did not meet the proposed separation requirements, Ameritech agrees with the Commission's proposal as a component in a framework for interLATA relief. Unfortunately, the Commission's tentative proposals do not provide BOCs with sufficient investment incentives because the "limited" interLATA relief discussed in the NPRM is so tightly circumscribed as to be useless in a commercial sense. Merely offering BOCs the chance to serve, on an interLATA basis, the advanced telecommunications needs of elementary and secondary schools and classrooms is an empty gesture because that freedom was expressly given by Congress over two years ago, as part of the incidental interLATA relief in section 271(g).⁵

⁴ NPRM, ¶¶ 190-196.

⁵ 47 U.S.C. § 271(g)(2).

In fact, the NPRM's proposals in this area are actually counterproductive. Requiring BOCs to first make a formal request which meets yet another set of "criteria"⁶ would actually impose new burdens not contemplated in the Act. Requiring them to do so only through a separate affiliate may actually violate the Act, which specifically exempted BOCs offering this type of incidental interLATA service from the separate subsidiary requirement.⁷ In reality, the "freedoms" which the NPRM proposes to extend to ILECs provide no investment incentives at all.

Despite its narrow focus and scope, the NPRM does hold out the prospect of meaningful section 706 relief for the BOCs in the form of limited modifications of LATA boundaries to facilitate BOC investment in advanced telecommunications capability. Ameritech believes that this proposal affords the Commission the opportunity not only to foster BOC investment in advanced telecommunications capability by eliminating one of the most significant impediment to such investment (that is, the existing LATA framework), but also to foster CLEC investment in such capabilities.

As the NPRM implicitly recognizes, the existing framework of LATA boundaries constitutes the most significant impediment to widespread deployment by the BOCs of advanced telecommunications capability. LATA boundaries impose unnecessary costs, particularly in rural areas -- the very areas where section 706 relief is needed most. They also deny the BOCs the opportunity to recover those costs from heavy users of advanced data services, such as large businesses and other institutions that need to transmit data among various locations.

⁶ NPRM, ¶ 192.

⁷ 47 U.S.C. § 272(a)(2)(B)(i).

One of the most significant ways in which LATA boundaries discourage BOC investment in advanced telecommunications capability is by forcing the BOCs to deploy redundant facilities in every LATA in which they seek to provide advanced services. In many cases, particularly in exurban areas where traffic is limited, these redundant facilities could not possibly be utilized to their full technological capacity. While this is a problem that afflicts all BOCs, it is particularly acute for Ameritech because of the very large number of LATAs -- 36 -- in Ameritech's local service territory. There are 17 LATAs in Illinois, more than in California. There are 11 LATAs in Indiana, more than in New York⁸. Twenty-five of the LATAs in Ameritech's region have insufficient network access lines to justify investment at this time in separate advanced telecommunications capability facilities for mass market deployment.

By denying Ameritech the ability to design and deploy an efficient data network, and to recover the costs of that network from heavy users of advanced data services (in particular, from multiLATA businesses and institutions), the existing LATA structure discourages ubiquitous deployment of advanced telecommunications capability. Unless Ameritech is permitted to aggregate traffic across LATA boundaries, particularly in exurban areas, and provide advanced data services to a broad mix of residential and business customers, it would not be cost effective for Ameritech to deploy advanced telecommunications capability outside urban areas.

If the Commission truly wants to encourage widespread deployment of advanced telecommunications capability, it must alter the BOCs' investment calculus by granting targeted interLATA relief for advanced data services. Specifically, the Commission

⁸ Illinois has 9 Ameritech-served LATAs, 3 independent ILEC-served LATAs and 5 LATAs which cross over from adjacent states. Indiana has 2 independent ILEC-served LATAs and 4 "cross-over" LATAs.

should modify LATA boundaries to permit a BOC: (1) to provide interLATA transport within a state for data service provided to customers with multiple locations in that state; (2) to concentrate data traffic across existing LATA boundaries and transport it to one ATM switch; and (3) to provide transport from an ATM switch to the closest network access point ("NAP") outside the LATA in which the switch is located, regardless of whether the NAP was located within the state. Only then could a BOC justify the investment necessary to ensure that all customers throughout its region have access to advanced telecommunications capability.

The only process that would afford meaningful and effective interLATA relief is one that provides swift and certain relief. Ameritech believes that the best approach would be to establish an objective test under which a BOC could obtain state-wide LATA relief for specified limited purposes. Ameritech proposes that a BOC should be granted the limited interLATA relief discussed above if that BOC demonstrates that it: (1) complies with applicable state and federal rules relating to the availability of ADSL, HDSL, and ISDN compatible loops; (2) complies with applicable state and federal rules regarding collocation; and (3) provides advanced data services through a separate affiliate that satisfies the separation framework adopted by the Commission.

The benefits of targeted interLATA relief to encourage BOC deployment of advanced telecommunications capability far exceed any realistic potential for harm from anticompetitive BOC conduct if such relief is granted. Moreover, the limited nature of relief proposed would not effectively eliminate LATA boundaries, nor would it undermine the market opening incentives of section 271. Consequently, the LATA relief

proposed by Ameritech is fully consistent with the Commission's prior LATA modification standards, and should be granted.

II. A NARROW WIRELINE-BASED APPROACH TO ADVANCED TELECOMMUNICATIONS CAPABILITY IS INCONSISTENT WITH THE ACT.

In the recent Notice of Inquiry initiated pursuant to section 706, the Commission correctly took a broad approach to the deployment of advanced telecommunications capability, urging

all segments of the Communications and related industries, including cable, telephony, terrestrial wireless, satellite, broadcast and others . . . to participate . . . It is critical that the analysis and debate surrounding section 706 focus not just on the more traditional, wired telecommunications network, but also on other emerging technologies for delivering higher bandwidth services.⁹

In the instant proceedings however, the Commission's proposals fall squarely upon the ILECs. Given the NOI's explicit recognition of the broad reach of section 706,¹⁰ and the wide range of alternative providers and technologies involved in the section 706 debate, the Commission can, and should, adopt more flexible treatment of wireline based services that can make advanced telecommunications capability available to all Americans.

The major policy pitfalls of a narrow wireline-based approach are threefold. First, focusing exclusively on ILECs would set up perverse incentives for other carriers to rely upon the infrastructure deployed (and yet to be deployed) by ILECs. In essence, by making ILEC facilities widely available at artificially-depressed prices, the Commission

⁹ In the Matter of Inquiry Concerning the Deployment of Advanced Telecommunications Capability. CC Docket No. 98-146, Notice of Inquiry, rel. August 7, 1998, (hereinafter "NOI"), ¶12.

¹⁰ The NOI notes that section 706's mandate is "without regard to any transmission media or technology". NOI, ¶ 6.

would reduce business incentives for deployment of other platforms and technologies which could -- and should -- compete with wireline-based advanced telecommunications capability on their own technical, service and price merits. Second, this form of distorted competition will unquestionably reduce the effectiveness of the marketplace's inherent dynamics by "stacking the deck" in favor of specific technologies, producing an economically-inefficient form of competition.

Third, and most importantly, the ILECs' advanced telecommunications capability investment incentives would obviously be diminished if others get access to the infrastructure in an asymmetrical arrangement; i.e., one that offers competitors full, unbundled, underpriced access to the ILECs' investment in advanced telecommunications capability while denying the ILECs any reasonable opportunity to earn a return on that investment. As long as alternative investments continue to be more financially attractive than the infrastructure investment required to meet customers' needs for advanced telecommunications capability, investment planning must reflect that reality. As former Common Carrier Bureau Chief Kathleen Wallman put it:

Do we really mean to say that any carrier that is thinking of building a new broadband network should count on being able to recover, from day one of operation, only the forward looking costs of their brand new network? I don't think so. No rational, efficient firm would take that deal. And that would be our collective loss, not just theirs.¹¹

What is needed are public policies that recognize the fact that multiple access technologies, provided by multiple segments of the telecommunications and related industries can, and should, be encouraged to deploy advanced telecommunications

¹¹ Remarks of Kathleen Wallman to the Annual Convention of the National Association of Regulatory Utility Commissioners, Boston, MA, November 11, 1997 (emphasis in original).

capability. Regulatory policy should not be designed to promote one technology over another. Rather, the regulatory goal should be to support investment by all, and let the market decide which technologies and services best meet customer needs. For example, it may be that cable television systems that pass virtually every home in this country will deploy cable modems widely and offer a competitive high-speed data service, compared to xDSL. As Comcast Corporation has argued: “[a]t any given time industry observers have different views about which of these systems is best suited to mass consumer demand.”¹²

Clearly, it is not the Commission’s role to choose one technology over another. Therefore, the fact that cable modems may provide an attractive high-speed option in no manner relieves the Commission of its statutory duty to encourage widespread deployment of advanced services “without regard to any transmission media or technology.” As such, the balance of these comments address measures to encourage advanced service deployment by CLECs using incumbents unbundled loops and collocation, and recommends regulatory changes to remove investment barriers to incumbent BOC deployment of advanced telecommunications capabilities.

III. MEASURES TO ENCOURAGE ADVANCED SERVICE DEPLOYMENT OF SERVICES USING UNBUNDLED LOOPS.

A. Ameritech Provides Nondiscriminatory Access To Loops That Are Capable of Transporting High-Speed Digital Signals.

In its Local Competition Order, the Commission required that ILECs unbundle

¹²NOI, ¶21-22 and note 18. See also, Barbara Esbin, “Internet over cable: Defining the Future in Terms of the Past,” “OPP Working Paper Series No. 30, Federal Communications Commission, Office of Plans and Policy, August 1998, at pp 77-80, discussing current “cable modem service deployment”.

local loops as a network element “at any technically feasible point.”¹³ The Commission defined a local loop to include “two-wire and four-wire loops that are conditioned to transmit the digital signals needed to provide services such as ISDN, ADSL, HDSL, and DS-1-level signals.”¹⁴ As a result, the Commission found in the NPRM that if a carrier requests an unbundled loop for provision of ADSL service, and “specifies that it requires a loop free of loading coils, bridged taps, and other electronic impediments, the ILEC must condition the loop to those specifications, subject only to considerations of technical feasibility.”¹⁵ The Commission also found that an ILEC may not deny a request for advanced data services simply because it does not intend to offer those services over its loop.

The Commission’s finding requiring conditioning is consistent with the Commission’s Local Competition Order which also imposed an obligation “in some instances to take alternative steps to condition existing loop facilities to enable carriers to provide services not currently provided over such facilities”.¹⁶ Thus, conditioning requirements in the NPRM are consistent with the existing obligations imposed under the Commission’s Local Competition Order that, where “technically feasible,” ILECs must

¹³ Implementation of the Local Exchange Competition Provisions of the Telecommunications Act of 1996 and Interconnection between Local Exchange and Commercial Mobile Radio Service Providers, CC Dockets Nos. 96-98 and 95-185, First Report and Order, rel. August 8, 1996 (hereinafter “Local Competition Order”), ¶380.

¹⁴ Id.

¹⁵ NPRM, ¶52.

¹⁶ In fact, the Commission specifically stated that if a competitor seeks to provide a digital loop functionality, such a ADSL, and the loop is not currently conditioned to carry digital signals, but it is technically feasible to condition the facility, the ILEC must condition the loop to permit the transmission of digital signals”. Local Competition Order, ¶382.

condition loops “to permit the transmission of digital signals”.¹⁷ In the Local Competition Order, the Commission also specifically held that the CLECs must compensate the ILECs for the costs they incur in performing that conditioning.¹⁸

1. As Required, Ameritech Performs Conditioning Necessary to Make an Existing Copper Loop ADSL-Compatible or HDSL-Compatible.

Consistent with the Commission’s requirements, Ameritech performs, to the extent feasible, conditioning on existing loops necessary to support a request for ADSL or HDSL transmission. Also, Ameritech provides unbundled loops that support each of the advanced services specified by the Commission -- ISDN, ADSL, HDSL, and DS1-level signals. As a general practice, if an existing compatible loop to the end user’s premises is not available, but can be provisioned through conditioning, Ameritech offers to perform that work. Ameritech promptly communicates to the CLEC the fact that conditioning is necessary and the costs of performing that conditioning. The CLEC then has the option of ratifying the order and agreeing to pay the costs, or canceling the order.

2. Not All Unbundled Loops Are xDSL-Compatible.

It is important to note there are technical and legal limitations on an ILEC’s provision of xDSL-compatible loops. As a legal matter, an ILEC is only required to provide network elements from its existing network. As the Eight Circuit Court of Appeals held, there is no duty to provide “superior quality”, and an ILEC is only required to provide access to its “existing network – not to a yet to be built superior one.”¹⁹ Ameritech agrees that an ILEC is required to make reasonable modifications to its

¹⁷ Id.

¹⁸ Id.

existing facilities, such as conditioning, to the extent necessary to accommodate interconnection or access to network elements.”²⁰ However, under section 251(c)(3) of the Act, an ILEC is not required to construct new facilities or make material network rearrangements or changes.

Moreover, as discussed below, there are well-established network limitations and incompatible network systems and configurations that limit the ability of some loops to support xDSL technology. For instance, the Commission noted that “xDSL is distance sensitive, and bandwidth for xDSL-based services decreases as loop length increases.”²¹ This conclusion is consistent with the Local Competition Order.²² For this reason, any rule regarding xDSL-compatible loops must recognize that loops over certain lengths and those with certain loop length and gauge combinations are not capable of supporting transmissions in the higher bandwidths used for advanced data services. Also, each advanced data service will have its own particular technical standards and transmission requirements that must be separately analyzed before any conclusion can be reached concerning the ability of existing unbundled loop types to support that service.

The Commission should not ignore its own findings and adopt faulty assumptions that ignore these fundamental limitations on loop transmission capabilities or the unique needs of each advanced service. The result would not only violate fundamental administrative procedural requirements, but could also lead to extensive litigation before

¹⁹ Iowa Utilities Board v. FCC, 120 F3d 753 (8th Cir. 1997) at 812-813.

²⁰ Id., note 33 (emphasis in original).

²¹ NPRM, ¶166.

²² Local Competition Order, ¶381. The Commission found that “a local loop that exceeds the maximum length allowable for the provision of a high-bit-rate digital service could not feasibly be conditioned for such service”.

state commissions requiring ILECs to continually re-prove basic technical facts.

3. Digital Loop Carrier Systems Also Present Network Technical Limitations

The Commission also recognizes that “xDSL transmissions can only be supported over continuous copper loops.”²³ Ameritech agrees and also concurs that “in order to provide an xDSL-based service over a loop passing through a remote terminal, the loop must either be reassigned to a physical copper pair connecting the end user’s premises to the central office, or the xDSL portion must terminate at the remote terminal, where it can be converted to a format compatible with digital loop carrier (i.e., through the use of a DSLAM at the remote terminal).”²⁴

Since DLC systems cannot yet support xDSL-compatible loop transmission, it is misleading for the Commission to state that “providing an xDSL-compatible loop as an unbundled loop is presumed to be ‘technically feasible’ if the ILEC is capable of providing xDSL-based services over that loop.”²⁵ This tentative conclusion incorrectly implies that, in a majority of cases, it is technically feasible for ILECs to provide xDSL-based service over DLC systems; in fact, just the opposite is true.²⁶

For these reasons, Ameritech also opposes the Commission’s proposal that ILECs have “the burden of proof of demonstrating that it is not technically feasible to provide

²³ NPRM, ¶166.

²⁴ Id.

²⁵ NPRM, ¶167.

²⁶ Even though certain vendors are developing plug-in units that may facilitate unbundling of certain DLC systems, these units have not yet been commercially introduced or fully tested. Moreover, these units will not provide the capability of supporting unbundled xDSL transmission via DLC systems supported by copper facilities, and may require significant augmentation before unbundled loops provided over fiber-based DLC systems can support xDSL-compatible loops.

requesting carriers with xDSL-compatible loops.”²⁷ This burden of proof should be modified to specifically recognize technical reality. To that end, although an ILEC has the burden of proof, the Commission should clarify that an ILEC has met its burden where it demonstrates that a nondiscriminatory loop assignment and provisioning process is in place that provisions xDSL-compatible loops to its data affiliate and CLECs on a comparable basis. For example where an ILEC is using a DLC system to provide the existing local loop, its processes could, for both CLECs and the ILEC’s data affiliate, require verification that spare existing DSL-compatible copper loop facilities are not available, and cannot reasonably be made available. Ameritech’s existing loop assignment procedures already perform this function in a nondiscriminatory manner.

4. Where Feasible, Ameritech Offers to Provide Compatible Unbundled Loops by Using Alternate Available Copper Loops.

The Commission states that “the ILECs’ obligation to provide requesting carriers with fully functioning conditioned loops extends to loops provisioned through remote concentration devices such as digital loop carriers (DLC).”²⁸ The Commission further notes that ILECs can meet this requirement where the DLC-based loop is “reassigned to a physical copper pair connecting the end user’s premises to the central office”²⁹

Ameritech meets these requirements. If no suitable spare copper facilities are available, Ameritech searches to see if there are existing customers served by copper facilities in the same area that can be transferred to the DLC system. If such copper facilities can be reasonably made available and re-arranged to meet the CLECs request,

²⁷ NPRM, ¶167.

²⁸ *Id.*, ¶54.

²⁹ *Id.*, ¶166.

Ameritech offers to use those copper facilities. Again, the CLEC is advised of the need to re-arrange facilities and the associated costs, and given the opportunity to accept or cancel the order.

5. Where Facilities Permit, Ameritech Connects Existing Copper Loop Components To Provision a Loop Capable of Supporting xDSL-Based Transmission.

The Commission notes that to provide xDSL-based service over a loop passing through a remote terminal, in addition to reassigning the loop to a physical copper pair, “the xDSL portion [can] be terminated at the remote terminal, where it can be converted to a format compatible with digital loop carrier”³⁰ Where feasible, Ameritech already provisions requests for xDSL-compatible loops, where a compatible loop is not currently available, by assembling available spare existing copper components into a compatible loop.

An unbundled loop is typically composed of three parts: (1) a feeder pair (“F1”), (2) a distribution pair (“F2”), and (3) a drop wire (“F3”) plus a network interface device (NID). While each of these local loop components may individually exist in Ameritech’s network, it is their assembly into a continuous transmission path that provides the capability to transmit information from the end user’s premises to the ILEC’s central office and, therefore, comprises a local loop. In order to support a request for an xDSL-compatible unbundled loop, all components of that loop must be capable of carrying digital transmissions.

It is possible that when an xDSL-compatible loop is not available, one can be assembled by connecting separate existing spare copper feeder, distribution and

³⁰ Id.

drop/NID components to provision the requested loop. Ameritech already offers this option. In this case, the CLEC is of course advised of the circumstances and given an opportunity to either pay the associated charges or cancel the order.

B. Ameritech's OSS Are Used to Provide Unbundled Loops, Including ADSL and HDSL-Compatible Loops.

The NPRM seeks input on the use of operations support systems ("OSS") to support the ordering and provisioning of loops for advanced data services, and tentatively concludes that ILECs should provide access to their databases so CLECs can identify xDSL-compatible loops.³¹ Ameritech's OSS support pre-ordering, ordering, provisioning, maintenance and billing of unbundled loops, including ADSL-compatible and HDSL-compatible loops. However, Ameritech does not have a database that provides the information needed to determine whether or not Ameritech will provision an ADSL-compatible or HDSL-compatible loop, nor should it be compelled to create one.

Ameritech does not provide direct access to its loop inventory database to its own data subsidiary or to CLECs. All loop requests, including those for ADSL-compatible and HDSL-compatible loops, are handled in the same manner. Thus, CLECs have equivalent access to Ameritech's OSS.

Access to ILECs' loop inventory database should not be required at this time. Ameritech's loop inventory database is only one part of overall loop assignment and provisioning processes. The assessment of loop availability is provided by human engineering knowledge, know-how and experience, not solely databases and software. Since the loop inventory database contains only partial and dynamic information,

³¹ NPRM, ¶¶157-8.

providing access to it would mislead CLECs by leaving the false impression that xDSL-compatible loops are not available at a location, where Ameritech may in fact be able to provide one. As long as an ILEC provides loop information and provisioning within its contractual or tariff commitments, this is an area that neither requires, nor lends itself to hard and fast national rules.

C. Subloop Unbundling Should Continue To Be Provided On a Case-By-Case Basis, Where Technically Feasible and Space Permits.

The Commission tentatively concludes that an incumbent must provide access to loops at remote terminals, where feasible and if space permits, because this form of unbundling may be “the only means by which competitive LECs can provide xDSL-based services to those end users whose connection to the central office is currently provided via digital loop carrier systems.”³² Ameritech already meets this requirement and is willing to provide unbundled access to its loops where technically feasible and where space permits, including at remote terminals. In accordance with the Local Competition Order, Ameritech handles requests for subloop unbundling on a case-by-case basis at the state level.³³

Ameritech agrees that requests for subloop unbundling should continue to be considered on a case-by-case basis, and technical feasibility and space availability are two of the key considerations in an ILEC’s analysis of a request. But the Commission’s tentative conclusions do not recognize the wide range of operational, administrative, service quality, and cost issues associated with any form of “subloop” unbundling,

³² NPRM, ¶174.

³³ The Commission found that “proponents of subloop unbundling do not address certain technical issues . . . [and that] the technical feasibility of subloop unbundling is best addressed at the state level on a case-by-case basis at this time”. Local Competition Order, ¶391 (emphasis supplied).

including at the remote terminal.

Subloop unbundling at the remote terminal is not normally necessary or desirable for a CLEC to obtain an xDSL-compatible loop. As previously discussed, Ameritech provisions and conditions available copper loops, to meet CLEC requests for xDSL-compatible loops. In most cases, copper loop facilities provide services that are superior to and less expensive than subloop unbundling for xDSL service. This is because an integrated copper loop terminates at the main frame in the ILEC's central office, thereby providing CLECs with access to all loops in a wire center at one consolidated collocation point.

In paragraph 175 of the NPRM, the Commission asks parties to discuss the technical issues arising from subloop unbundling. As a general matter, subloop unbundling creates severe technical, space availability, operational and administrative problems. Ameritech addressed these issues in detail in its Comments filed in the Commission's Local Competition Docket.³⁴ In addition, it attached to its Comments in that Docket a White Paper prepared by Bellcore that developed the problems associated with sub loop unbundling in more detail.³⁵ Ameritech will not here repeat its Comments and the Bellcore White Paper, but as an accommodation has attached a copy of the White Paper hereto as Attachment 1.

After three years, Ameritech has still not received a specific request for unbundled access to subloop elements. Accordingly, the demand, potential points of

³⁴ In the Matter of Implementation of the Local Competition Provisions of the Telecommunications Act of 1996, CC Docket No. 96-98, 95-185, Comments of Ameritech, filed May 16, 1996, at 37-42.

³⁵ Issues concerning the Provision of Unbundled Subloop Elements by Ameritech, Bellcore, May, 1996 (Attachment 1).

interconnection, applications, and costs of subloop unbundling are still not known. For the same reasons, no more information is available on the technical, administrative, and space-availability limitations on subloop unbundling than was known at the time the Commission released the Local Competition Order. For that reason it is still appropriate to address technical and space availability issues on a “case-by-case” basis at the state level.³⁶

The operation of a telecommunications infrastructure is complex and requires extensive engineering and coordination. Network design, planning, architecture, installation, maintenance, operational support systems, and other functions involve the management of a complicated series of interrelated processes to run smoothly. In the case of loop, distribution and feeder, these facilities were designed and installed to provide contiguous loops. As such, subloop unbundling is a fundamental shift in the utilization of loop facilities.

At best, subloop unbundling creates a host of new carrier interoperability, compatibility and cooperation issues. More importantly, subloop unbundling is not always technically feasible, because the facilities involved may not have been designed to support multiple carriers, or there may be insufficient space in existing outside network structures to accommodate multiple-carrier interfaces.

Subloop unbundling, while in some cases technically feasible, is impractical to offer except on a case-by-case basis. Ameritech’s Comments in the Local Competition Docket pointed out that:

Such arrangements cannot be accomplished by reprogramming software or even a switch. Implementation is required in the field at the thousands of potential points

³⁶ Local Competition Order, ¶391.

of access to subloop elements. For example, in Illinois alone access to loop transmission at Ameritech end offices would create around 300 possible points of access. If even the most basic form of subloop unbundling were implemented at aboveground cabinets and controlled environment vaults, over 24,000 additional possible points would have to be created in the field throughout Illinois. If further unbundling were required at pedestals and poles, the number of potential points would balloon to several million – virtually one for every subscriber.³⁷

Approximately 27% of all in-service Ameritech access lines are connected directly from the MDF to customer sites without a Feeder Distribution Interface (FDI). This means that subloop unbundling is not possibly available for these types of loops since they connect directly from the central office (CO) to the customer premises. Moreover, as the Bellcore White Paper³⁸ finds, many other types of facilities are not capable of supporting subloop unbundling. For example:

Many existing SAIs [serving area interfaces] are not capable of handling subloop interconnection. SAIs are implemented to provide feeder to distribution connection for a specific geographic serving area containing an identifiable number of living units or other customer sites with a specific forecasted service demand. Each SAI is designed to provide a specific feeder to distribution ratio that is appropriate for the area served. The SAI is sized to afford termination of the total number of feeder pairs and distribution pairs needed based on the expected service demands of the area served. In many cases, SAIs are ordered from the manufacturer with cable pairs preconnected and terminated in the factory.

Some other network architecture issues arising from subloop unbundling are:

- Remote terminal space limits TC access; a work-around solution to accommodate Digital Loop Carrier (DLC) systems must be implemented.
- Additional plant may oversize the network and increase incremental costs as CLECs may overstate forecasts and cause Ameritech to build unnecessarily.
- Subloop unbundling may limit the ILEC's ability to modernize its outside plant in cases where such modernization may affect a CLEC that is using a portion of the facility involved as a subloop.

³⁷ Comments of Ameritech, May 16, 1996 at 40-41.

³⁸ Attachment 1.

- Subloop unbundling increases the likelihood of incompatible signals between carriers.
- Network integrity is decreased. Constant plant rearrangement to accommodate various carrier requests will increase the probability of conflicts and associated trouble reports.

When compared to subloop unbundling, Ameritech believes that the most economically efficient and customer-focused means of providing xDSL-compatible loops is to use or find copper-based loops to support a request. However, as required, Ameritech will process requests for subloop unbundling on a case-by-case basis, and will provide the service where technically feasible and space permits. In instances where it cannot meet a request, Ameritech will be prepared to prove to state regulators that the request is not technically feasible, or that there is insufficient space to provide the subloop unbundling at the requested point.

IV. IT IS PREMATURE TO REQUIRE SPECTRUM SHARING ON LOOPS.

The Commission requests input on a number of issues related to spectrum management on local loops; that is, whether and how the same physical local loop could be shared among multiple providers through the use of different ranges of the spectrum.³⁹ The use of different portions of the spectrum by multiple providers on the same local loop creates a host of new issues and problems. New issues that arise from spectrum sharing include service quality and reliability; equipment compatibility; inter-carrier cooperation; operational procedures and practices; administrative systems; and OSS.

Spectrum sharing is a complex, multi-faceted issue that will require development of new and modified industry standards, administration capabilities, operational

³⁹ NPRM, ¶¶160-2.